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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/720,789	12/29/2000	Takashi Miyachi	201413US2PCT	5001

7590 01/28/2003
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EXAMINER

NGUYEN, HUNG

ART UNIT PAPER NUMBER

2851

DATE MAILED: 01/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/720,789

Applicant(s)

MIYACHI, TAKASHI

Examiner

Hung Henry V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed 11/19/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-18 and 23-30 is/are rejected.
- 7) ☒ Claim(s) 4-6, 20-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Upon reconsideration of the restriction requirement sent May 8, 2002, the Examiner has decided that it would be more beneficial to the Office, Applicant and Public to examine all claims as originally filed. Thus, the restriction made on May 8, 2002 is hereby vacated.

Prosecution Status

2. This office action is Non-Final since the Examiner has advanced new arguments.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 7-18, 23-30 are rejected under 35 U.S.C 103(a) as being unpatentable over Wakamoto et al (U.S.Pat. 6,277,533).

With respect to claims 1-3, 7-18, 23-30, Wakamoto discloses a scanning exposure apparatus and corresponding method comprising substantially all of the basic features of the instant claims including a mask stage (9) for holding the mask (7); a substrate stage (20-22) for holding the substrate (15); a first detecting system (AF) for detecting a position for at least one of detection point in the optical axis direction of the projection optical system (PL); a first driving system (12, 24) for driving the mask stage and the substrate stage in planes perpendicular to the optical axis, and second driving system (Z level stage, 19) for driving the substrate to the optical

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direction and tilt direction; a memory unit for storing the data regarding the surface condition of the substrate and a control system (13) (see col.20, lines 24-41) for controlling the driving systems based on the detected signals from the detecting system representing the surface condition of the substrate (see col.59-67). Wakamoto does not expressly disclose that deciding between either a first focus control mode or a second focus control mode to be used based on the surface condition where the first control mode is performing a tilt control of the substrate while the pattern is transferred onto the substrate and the second control mode is maintaining a tilt of the substrate while the pattern is transferred onto the substrate. However, as discussed, Wakamoto suggests that the inclination of the substrate during exposure is controlled based on the detected inclination. Additionally, Wakamoto teaches adjusting the positional relation between an image plane of the projection optical system and the substrate based on the detected positional information during the movement of the substrate for exposure (see col.46, lines 41-49). This provides a clear suggestion that selecting between either performing a tilt control of the substrate while the pattern is transferred onto the substrate (or a first control mode) or maintaining a tilt of the substrate while the pattern is transferred onto the substrate (or a second control mode) would be obvious to a skilled artisan in the art in view of Wakamoto's teachings for the purpose of obtaining proper position alignment and improving the quality of the images to be printed on the substrate.

Allowable Subject Matter

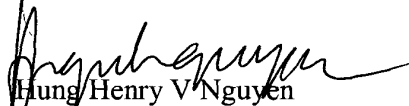
4. Claims 4-6 and 19-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 703-305-6462. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.


Hung Henry V Nguyen
Primary Examiner
Art Unit 2851

hvn
January 23, 2003